Complete Summary

GUIDELINE TITLE

Periodic health examination, 1999 update: 1. Detection, prevention and treatment of obesity.

BIBLIOGRAPHIC SOURCE(S)

Douketis JD, Canadian Task Force on Preventive Health Care, Feightner JW, Attia J, Feldman WF. Periodic health examination, 1999 update: 1. Detection, prevention and treatment of obesity. CMAJ 1999 Feb 23;160(4):513-25. [128 references]

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Obesity

GUIDELINE CATEGORY

Prevention
Screening
Treatment

CLINICAL SPECIALTY

Family Practice
Internal Medicine

INTENDED USERS

Advanced Practice Nurses
Allied Health Personnel

Nurses
Physician Assistants
Physicians
Students

GUIDELINE OBJECTIVE(S)

- To evaluate the evidence relating to the effectiveness of methods to prevent and treat obesity
- To provide recommendations for the prevention and treatment of obesity in adults aged 18 to 65 years and for the measurement of the body mass index (BMI) as part of a periodic health examination.

TARGET POPULATION

Adults

INTERVENTIONS AND PRACTICES CONSIDERED

In adults with obesity (body mass index [BMI] greater than 27) management options include:

1. Weight reduction
2. Prevention of further weight gain
3. No intervention

MAJOR OUTCOMES CONSIDERED

The long-term (more than 2 years) effectiveness of (a) methods to prevent obesity and (b) methods to treat obesity

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Hand-searches of Published Literature (Secondary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

MEDLINE was searched for articles published from 1966 to April 1998 that related to the prevention and treatment of obesity. The key words used for the search were "obesity" and "body mass index," and the MeSH terms used were "diet therapy," "drug therapy," "prevention and control," "surgery" and "therapy." Additional articles were identified from the bibliographies of review articles and the listings of Current Contents.

To limit the analysis to studies with the highest methodologic quality, study-selection criteria were developed a priori. Studies were included if they met the

following criteria: (a) the study was either a prospective cohort study or a randomized controlled trial investigating the prevention of obesity or the treatment of obesity with dietary, pharmacologic, surgical, dietary counselling or behavioural methods of weight reduction; (b) the duration of patient follow-up was at least 2 years (1 year if the study involved anorectic drugs, because of a preliminary scan of these articles revealed that there were only 2 such studies with a follow-up of at least 2 years); (c) the main outcome measure was the effect of the weight-reduction intervention on body weight or BMI; and (d) at least 50 patients were included. Studies meeting those criteria were excluded if (a) there was nonconsecutive selection of patients; (b) there was no documentation of patients lost to follow-up treatment studies; and (c) the weight-reduction interventions are considered unsafe and are not recommended for use (e.g., complete fasting, jaw wiring, intestinal bypass surgery). In studies with multiple publications, the version with the longest follow-up duration was included in the analysis.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Quality of evidence was rated according to 5 levels:

I - Evidence from at least 1 properly randomized controlled trial (RCT).

II-1 - Evidence from well-designed controlled trials without randomization.

II-2 - Evidence from well-designed cohort or case-control analytic studies, preferably from more than 1 centre or research group.

II-3 - Evidence from comparisons between times or places with or without the intervention. Dramatic results in uncontrolled experiments could also be included here.

III - Opinions of respected authorities, based on clinical experience, descriptive studies or reports of expert committees.

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

All eligible studies were reviewed and data extraction was performed by one of the guideline authors. Part of the literature search, from 1994 to April 1998, and

the data extraction from a randomly selected subgroup of included studies was duplicated independently by another guideline author to assess agreement in study selection and outcome reporting. Agreement was evaluated using kappa statistic, and disagreements were resolved by consensus.

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

A 13- member Task Force of experts in family medicine, geriatric medicine, pediatrics, psychiatry and epidemiology used an evidence-based method for evaluating effectiveness of preventive health care interventions. Recommendations were not based on cost-effectiveness of options. Patient preferences were not discussed.

Background papers providing critical appraisal of the evidence and tentative recommendations prepared by the chapter author were pre-circulated to the members. Evidence for this topic was presented and deliberated upon in 1- to 2-day meetings, 2 to 3 times per year from January 1993 to June 1993. Consensus was reached on final recommendations.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Grades of Recommendation:

A. Good evidence to support the recommendation that the condition be specifically considered in a periodic health examination (PHE).
B. Fair evidence to support the recommendation that the condition be specifically considered in a PHE.
C. Poor evidence regarding inclusion or exclusion of the condition in a PHE, but recommendations may be made on other grounds.
D. Fair evidence to support the recommendation that the condition be specifically excluded from consideration in a PHE.
E. Good evidence to support the recommendation that the condition be specifically excluded from consideration in a PHE.

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

External Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Not stated

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Recommendation grade [A, B, C, D, E] and level of evidence [I, II-1, II-2, II-3, III] are indicated after each recommendation. These definitions are repeated following the recommendations. Citations in support of individual recommendations are identified in the guideline text.

Prevention:

- There is insufficient evidence to recommend in favour of or against community-based obesity prevention programs; however, because of considerable health risks associated with obesity and the limited long-term effectiveness of weight-reduction methods, the prevention of obesity should be a high priority for health care providers [C, II-1].

Treatment:

- For obese adults without obesity-related diseases, there is insufficient evidence to recommend in favour of or against weight-reduction therapy because of a lack of evidence supporting the long-term effectiveness of weight-reduction methods [C, I, II-1, II-2];
- For obese adults with obesity-related diseases (e.g., diabetes mellitus, hypertension), weight reduction is recommended because it can alleviate symptoms and reduce drug therapy requirements, at least in the short term [B, I, II-1]

Detection:

- For people without obesity-related diseases, there is insufficient evidence to recommend the inclusion or exclusion of body mass index (BMI) measurement as part of a periodic health examination (PHE), and therefore BMI measurement is left to the discretion of individual health care providers [C, II-2];
- For people with obesity-related diseases, BMI measurement is recommended because weight reduction should be considered with a BMI of more than 27 [B, I, II-2].

Definitions:

Recommendation Grade:

A. Good evidence to support the recommendation that the condition be specifically considered in a periodic health examination (PHE).
B. Fair evidence to support the recommendation that the condition be specifically considered in a PHE.
C. Poor evidence regarding inclusion or exclusion of the condition in a PHE, but recommendations may be made on other grounds.
D. Fair evidence to support the recommendation that the condition be specifically excluded from consideration in a PHE.

E. Good evidence to support the recommendation that the condition be specifically excluded from consideration in a PHE.

Level of Evidence:

I - Evidence from at least 1 properly randomized controlled trial (RCT).

II-1 - Evidence from well-designed controlled trials without randomization.

II-2 - Evidence from well-designed cohort or case-control analytic studies, preferably from more than 1 centre or research group.

II-3 - Evidence from comparisons between times or places with or without the intervention. Dramatic results in uncontrolled experiments could also be included here.

III - Opinions of respected authorities, based on clinical experience, descriptive studies or reports of expert committees.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

Detection

Maneuver:

Body mass index (BMI) measurement

Level of Evidence:

Seventeen cohort studies (II-2)

Five randomized controlled trials (RCTs) (I)

Prevention

Maneuver:

Community-based obesity prevention programs

Level of Evidence:

Three nonrandomized trials (II-1)

Treatment

Maneuver:

Weight-reduction therapy (dietary, pharmacologic, surgical or behavioural)

Level of Evidence:

Thirty-one RCTs (I)

Thirteen nonrandomized trials (II-1)

Ten cohort studies (II-2)

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Health benefits of weight reduction were evaluated in terms of alleviation of symptoms, improved management of obesity-related diseases and a reduction in major clinical outcomes.

Studies investigating the effect of dietary therapy on obesity often find initial weight reductions which are followed by gradual weight regain.

A similar reduction-regain pattern is observed with anoretic drug therapy, with effective weight loss during the first six months of treatment, while the effectiveness beyond 1 year has only been shown in a small proportion of patients from a single study.

Long-term success has been reported in a number of studies investigating weight-reduction surgery.

Long-term dietary counseling has been shown to be successful in a small proportion of patients who achieved sustainable moderate weight-loss.

Despite earlier concerns about the risks associated with repeated episodes of weight loss and weight regain (weight cycling), recent reviews have found that weight cycling is not associated with increased mortality.

POTENTIAL HARMS

Very-low-calorie diets have been associated with fatigue, dizziness, hair loss, menstrual irregularities, cholelithiasis, gouty arthritis and cardiac arrhythmias.

Anorectic drug therapy is associated with drowsiness, fatigue, nausea, diarrhea, urinary retention, dry mouth and a small but clinically important increased risk of pulmonary hypertension and valvular heart disease.

Postoperative morbidity following weight-reduction surgery occurred in less than 5% of patients in the studies reviewed, with re-operative rates reported from 1.7% to 7.1% in 3 studies and 20.3% to 33.3% in 2 others.

Weight-reduction interventions are also associated with an increased risk of major depression, bulimia and other eating disorders.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

Implementation of preventive activities in clinical practice continues to be a challenge. To address this issue, Health Canada established a National Coalition of Health Professional Organizations in 1989. The purpose was to develop a strategy to enhance the preventive practices of health professionals. Two national workshops were held. The first focused on strengthening the provision of preventive services by Canadian physicians. The second addressed the need for collaboration among all health professionals. This process led to the development of a framework or "blueprint for action" for strengthening the delivery of preventive services in Canada (Supply and Services Canada: an Inventory of Quality Initiatives in Canada: Towards Quality and Effectiveness. Health and Welfare Canada, Ottawa, 1993). It is a milestone for professional associations and one that will have a major impact on the development of preventive policies in this country.

In 1991 the Canadian Medical Association spearheaded the creation of a National Partnership for Quality in Health to coordinate the development and implementation of practice guidelines in Canada. This partnership includes the following: the Association of Canadian Medical Colleges, the College of Family Physicians of Canada, the Federation of Medical Licensing Authorities of Canada, the Royal College of Physicians and Surgeons of Canada, the Canadian Council on Health Facilities Accreditation, and the Canadian Medical Association.

The existence of guidelines is no guarantee they will be used. The dissemination and diffusion of guidelines is a critical task and requires innovative approaches and concerted effort on the part of professional associations and health care professionals. Continuing education is one avenue for the dissemination of guidelines. Local physician leaders, educational outreach programs, and computerized reminder systems may complement more traditional methods such as lectures and written materials.

Public education programs should also support the process of guideline dissemination. In this context, rapidly expanding information technology, such as interactive video or computerized information systems with telephone voice output, presents opportunities for innovative patient education. The media may also be allies in the communication of some relevant aspects of guidelines to the public. All of these technologies should be evaluated.

The implementation of multiple strategies for promoting the use of practice guidelines requires marshaling the efforts of governments, administrators, and health professionals at national, provincial and local levels. It is up to physicians

and other health professionals to adopt approaches for the implementation of guidelines in clinical practice and to support research efforts in this direction.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Staying Healthy

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Douketis JD, Canadian Task Force on Preventive Health Care, Feightner JW, Attia J, Feldman WF. Periodic health examination, 1999 update: 1. Detection, prevention and treatment of obesity. CMAJ 1999 Feb 23;160(4):513-25. [128 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

1999

GUIDELINE DEVELOPER(S)

Canadian Task Force on Preventive Health Care - National Government Agency [Non-U.S.]

SOURCE(S) OF FUNDING

Health Canada

GUIDELINE COMMITTEE

Canadian Task Force

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

The Task Force consisted of experts in family medicine, geriatric medicine, pediatrics, psychiatry and epidemiology.

Author: James D. Douketis, MD; John W. Feightner, MD; John Attia, MD, PhD; William F. Feldman, MD

Names of current Task Force members: John W. Feightner, MD, MSc, FCFP, Chair; R. Wayne Elford, MD, CCFP, FCFP; Michel Labrecque, MD, MSc, CCFP, FCFP; Harriet MacMillan, MD, MSc, FRCP(C); Robin McLeod, MD, FRCS(C); Jean-Marie Moutquin, MD, MSc, FRSC(C); Christopher Patterson, MD, FRCPC; Elaine Wang, MD, CM, MSc, FRCP(C)

Names of former Task Force members: Richard Goldbloom, OC, MD, FRCPC, (Chairman, 1988-1994); Walter O. Spitzer, MD, MPH, (Chairman, 1976-1988); Renaldo Battista, MD, ScD, FRCPC (Past Vice-Chairman); Geoffrey Anderson, MD, PhD; Marie-Dominique Beaulieu, MD, MSc, FCFP; William Feldman, MD, CM, FRCPC; Alexander G. Logan, MD, FRCPC; Brenda J. Morrison, PhD; David R. Offord, MD, FRCPC

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not Stated

GUIDELINE STATUS

This is the current release of the guideline. This guideline updates and replaces previous recommendations published by the Canadian Task Force on Preventive Health Care (CTFPHC) (In: Canadian Task Force on the Periodic Health Examination. Canadian Guide to Clinical Preventive Health Care. Ottawa: Health Canada, 1994. p. 574-84.)

An update is not in progress at this time. The recommendations have been reviewed by the guideline developer within the last five years and are still considered current.

A complete list of planned reviews, updates and revisions is available under the What's New section at the CTFPHC Web site.

GUIDELINE AVAILABILITY

Print copies: Available from Canadian Task Force on Preventive Health Care, 100 Collip Circle, Suite 117, London, Ontario N6G 4X8, Canada; e-mail, ctf@ctfphc.org.

Also available from Health Services Directorate, Health Services and Promotion Branch, Department of National Health and Welfare, Tunney's Pasture, Ottawa ON K1A 1B4, Canada.

AVAILABILITY OF COMPANION DOCUMENTS

The following are available:

- Stachenko S. Preventive guidelines: their role in clinical prevention and health promotion. Ottawa: Health Canada, 1994. Available from the Canadian Task Force on Preventive Health Care (CTFPHC) Web site.
- CTFPHC history/methodology. Ottawa: Health Canada, 1997. Available from the CTFPHC Web site.
- Quick tables of current recommendations. Ottawa: Health Canada, 1997. Available from the CTFPHC Web site.

PATIENT RESOURCES

None available

NGC STATUS

This summary was completed by ECRI on December 7, 1999. The information was verified by the guideline developer on February 24, 2000.

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